
Aspire ASM7720

Service Guide

Service guide files and updates are available on the AIPG/CSD web; for more information please refer to <http://csd.acer.com.tw>

PRINTED IN TAIWAN

Revision History

Please refer to the table below for the updates made on aBulldog
ASM7720 Service Guide.

| Date | Chapter | Updates |
|-------------|----------------|----------------|
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Conventions

The following conventions are used in this manual:

| | |
|----------------------------|--|
| SCREEN MESSAGES | Denotes actual messages that appear on screen. |
| NOTE | Gives bits and pieces of additional information related to the current topic. |
| WARNING | Alerts you to any damage that might result from doing or not doing specific actions. |
| CAUTION | Gives precautionary measures to avoid possible hardware or software problems. |
| IMPORTANT | Remind you to do specific actions relevant to the accomplishment of procedures. |

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the BASIC CONFIGURATION decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office MAY have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These LOCALIZED FEATURES will NOT be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
2. Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You MUST use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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System Specifications

Features

Operating System

- Microsoft Windows Vista Premium 64-bit

Processor

- Socket Type: Intel® Socket T LGA 1366 pin
- Processor Type:
 - Intel Bloomfield i7 CPUs
 - FSB 1600 MHz CPUs

Chipset

- Intel X58 + ICH10R

PCB

- Form Factor: Micro ATX
- Dimension/Layer: 244mm x244mm

Memory

- Memory Type: DDR3 1066
- Support single channel 64 bit mode with maximum memory size up to 12GB
- Support un-buffered DIMM (ICH10R)
- DIMM Slot: 6
- Memory Max: 1GB to 12GB DDR3 memory technologies
- Capacity: Up to 2GB per DIMM with maximum memory size up to 12GB

PCI

- PCI Express Slot Type: x16
 - PCI Express x16 Slot Quantity: 2
- PCI Express Slot Type: x4
 - PCI Express x4 Slot Quantity: 1
- PCI Express Slot Type: x1

-
- PCI Express x1 Slot Quantity: 1

SATA

- Slot Type: SATA slot
- Slot Quantity: 6
- Storage Type support:
 - HDD/CD-ROM/CD-RW/DVD-ROM/DVD-RW/DVD+RW/DVD Dual/DVD SuperMultiPlus/Blu-Ray ODD

Audio

- Audio Type: HD audio codec
- Audio Channel: 7.1 channel
- Audio Controller /Codec: ALC888S-VE 7.1
- Connectors support:
 - Rear 6 jack follow HD audio definition,
 - Audio jacks color coding: should meet Microsoft Windows Logo Program Device Requirements: Audio-0002
 - 1 front panel audio header (2*5)
 - S/N ratio: 90 dB at rear output jack

LAN

- MAC Controller: ICH10R
- Should be worked under 10M/100M/1000Mbps environment
- PHY: Intel 82567LF Boazman Gbe Ethernet LAN PHY.

USB

- Controller Type: ICH10R
- Ports Quantity: 12
 - 6 back panel ports
 - On-board: 3 2*5 headers (6 ports)
 - 4 ports for front daughter board
 - 2 ports for internal card reader

-
- ☐ Connector Pin: standard Intel FPIO pin definition
 - ☐ Data transfer rate support:
 - ☐ USB 2.0/1.1
 - ☐ Design Criteria:
 - ☐ Should meet Acer USB drop criteria

1394

- ☐ Controller: VIA 6315N 1394a controller
- ☐ Connector Quantity: 2
 - ☐ 1 rear 6pin IEEE1394 port
 - ☐ 1 2x5pin onboard jumper

BIOS

- ☐ BIOS Type: Phoenix Award or AMI Kernel with Acer skin
- ☐ Size: 32Mb
- ☐ Note:
 - ☐ Boot ROM should be included (PXE function should be built in with default and RPL function is optional by service BIOS)
 - ☐ BIOS shall auto detect FDD to avoid checksum error when boot

I/O Connector

- ☐ Controller: Super I/O ITE8720 (F stepping or after; must full support Intel platform)

Rear I/O Connector

- ☐ 1 PS/2 Keyboard port,
- ☐ 1 PS/2 Mouse port,
- ☐ 2 e SATA ports
- ☐ 1 RJ45 LAN port,
- ☐ 1 IEEE 1394 port
- ☐ 6 USB ports
- ☐ 7.1 channel phone jack (6 audio jacks)

On-board connectors

- ☐ 1 CPU socket
- ☐ 6 DDR-3 memory sockets
- ☐ 2 PCI Express x16 slot
- ☐ 1 PCI Express x 4 slots
- ☐ 1 PCI Express x 1 slots
- ☐ 6 SATA connectors(Need to confirm no interfere with gfx card)
- ☐ 3 2*5 pin Intel FPIO specification USB pin connectors (follow Intel FPIO standard Specification)
- ☐ 1 2*5 pin IEEE1394 jumper
- ☐ 1 2*5 pin Intel FPIO spec. Microphone In/ Headphone Out pin connectors
- ☐ 1 serial port 2*5 pin connector
- ☐ 1 4 pin CPU/SYS Fan connector
- ☐ 5 3 pin System FAN connector with linear circuit
- ☐ 1 24pin + 8pin ATX interface PS3/PS2 SPS connector
- ☐ 1 2*7 pin front panel IO header
- ☐ 1 Jumper for clear CMOS
- ☐ 1 on board buzzer
- ☐ Color management for on board connector (pls provide proposal)

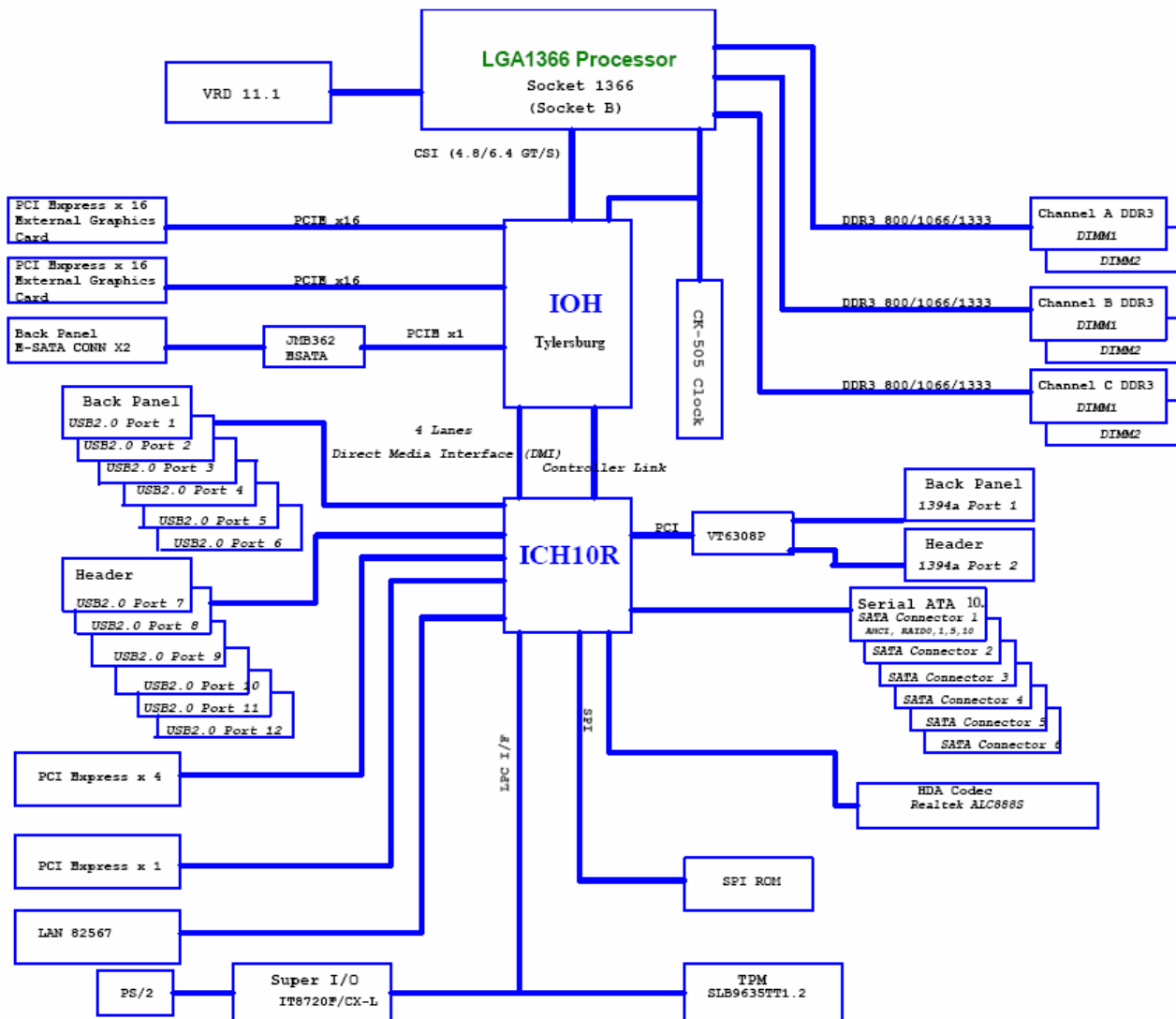
Power Supply

- ☐ Power Supply Mounting Features
 - ☐ Chassis accepts ATX-style power supply
 - ☐ Chasses accepts PS2, PS3 style power supply
 - ☐ Features for internal mounting tab
 - ☐ Location of 4 external mounting holes
- ☐ Power Supply Electrical Design Feature
 - ☐ 400W ~1000W in stable mode (Acer Assign System Power Unit)
 - ☐ Voltage design should be covered +5V, +3.3V, +12V, +5VSB, -12V (attention to

12V output capability)

- ☐ Demand for both PFC/Non-PFC solutions (two different quotations are needed)
- ☐ Minimum 6 Serial ATA power connector solution should be included (by default)
- ☐ Minimum 3 6-pin graphic card connector included
- ☐ Minimum 2 big 4-pin power connector included
- ☐ Full Range PSU
- ☐ PS2 style

Block Diagram



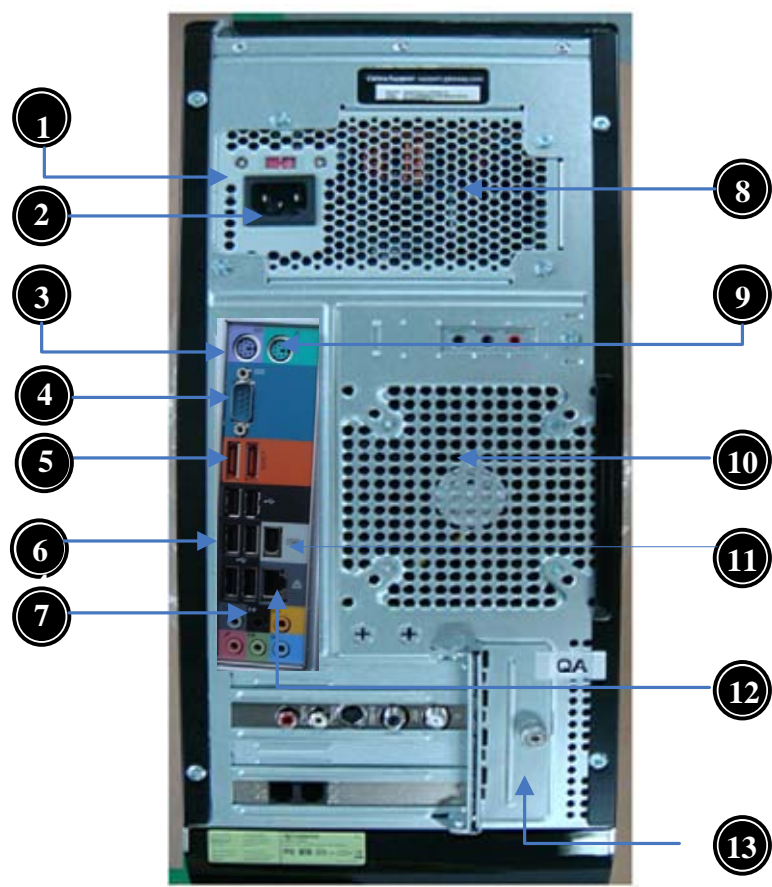
Aspire ASM7720 Front Panel

The computer's front panel consists of the following:



| Label | Description |
|-------|--------------------------|
| 1 | Media Control Center |
| 2 | Optical drive |
| 3 | Speaker /Microphone jack |
| 4 | Gateway Logo |
| 5 | Card reader |
| 6 | Power button |

Aspire M5700 Rear Panel



| Label | Description | Label | Description |
|-------|-------------------------|-------|----------------------|
| 1 | Voltage selector switch | 8 | Fan aperture |
| 2 | Power card socket | 9 | PS/2 mouse connector |
| 3 | PS/2 keyboard connector | 10 | System FAN |
| 4 | Serial port | 11 | 1394 connector |
| 5 | ESATA port | 12 | LAN connector |
| 6 | USB 2.0 connector | 13 | Lock Handle |
| 7 | Audio connector | | |

Hardware Specifications and Configurations

Processor

| Item | Specification |
|-------------------------|---|
| Type | Intel Bloomfield i7 CPUs |
| Socket | LGA 1366 pin |
| FSB | 1600 MHz |
| Minimum operating speed | 0 MHz (If Stop CPU Clock in Sleep State in BIOS Setup is set to Enabled.) |

BIOS

| Item | Specification |
|------------------------------------|--|
| BIOS code programmer | Phoenix Award or AMI Kernel with Acer skin |
| BIOS version | R01-A1 |
| BIOS ROM type | SPI Flash |
| BIOS ROM size | 32Mb |
| Support protocol | SMBIOS(DMI)2.4/DMI2.0 |
| Device Boot Support | <ul style="list-style-type: none">- 1st priority: SATA HDD- 2nd priority: CD-ROM- 3rd priority: FDD- 4th priority: LAN- 5th priority: USB device |
| Support to LS-120 drive | YES |
| Support to BIOS boot block feature | YES |

BIOS Hotkey List

| Hotkey | Function | Description |
|---------------|--------------------------|--|
| Del | Enter BIOS Setup Utility | Press while the system is booting to enter BIOS Setup Utility. |

Main Board Major Chips

| Item | Specification |
|----------------------|--|
| North Bridge | Intel X58 |
| South Bridge | ICH 10R |
| APG controller | Intel X58 |
| Super I/O controller | ITE 8720 |
| Audio controller | Realtek HD audio codec ALC888S-VE codec 7.1 (co-lay with ALC888) |
| LAN controller | Intel 82567LF Boazman Gbe Ethernet LAN PHY |
| HDD controller | ICH 10R |
| Keyboard controller | ITE 8720 |

Memory Combinations

| Slot | Memory | Total Memory |
|---------------------------------|---------------|---------------------|
| Slot 1 | 1GB, 2GB | 1GB ~2GB |
| Slot 2 | 1GB, 2GB | 1GB ~2GB |
| Slot 3 | 1GB, 2GB | 1GB ~2GB |
| Slot 4 | 1GB, 2GB | 1GB ~2GB |
| Slot 5 | 1GB, 2GB | 1GB ~2GB |
| Slot 6 | 1GB, 2GB | 1GB ~2GB |
| Maximum System Memory Supported | | 1GB ~12GB |

System Memory

| Item | Specification |
|--|---|
| Memory slot number | 6 slot |
| Support Memory size per socket | 1GB/2GB |
| Support memory type | DDR3 |
| Support memory interface | DDR3 1066MHz |
| Support memory voltage | 1.5V |
| Support memory module package | 240-pin DDR3 |
| Support to parity check feature | Yes |
| Support to error correction code (ECC) feature | No |
| Memory module combinations | You can install memory modules in any combination as long as they match the above specifications. |

Audio Interface

| Item | Specification |
|------------------------|--|
| Audio controller | Intel ICH 10R |
| Audio controller type | ALC888S-VE |
| Audio channel | codec 7.1 |
| Audio function control | Enable/disable by BIOS Setup |
| Mono or stereo | Stereo |
| Compatibility | Sound Blaster Pro/16 compatible Mixed digital and analog high performance chip Enhanced stereo full duplex operation High performance audio accelerator and AC'97 support Full native DOS games compatibility Virtual FM enhances audio experience through real-time FM-to-Wavetable conversionMPU-401 (UART mode) interface for Wavetable synthesizers and MIDI devices Integrated dual game port Meets AC'97and WHQL specifications |
| Music synthesizer | Yes, internal FM synthesizer |
| Sampling rate | 48 KHz (max.) |
| MPU-401 UART support | Yes |
| Microphone jack | Supported |
| Headphone jack | Supported |

SATA Interface

| Item | Specification |
|------------------------------|----------------------|
| SATA controller | Intel ICH 10R |
| SATA controller resident bus | PCI bus |
| Number of SATA channel | SATA X 6 |
| Support bootable CD-ROM | YES |

USB Port

| Item | Specification |
|-------------------------|---|
| Universal HCI | USB 2.0/1.1 |
| USB Class | Support legacy keyboard for legacy mode |
| USB Connectors Quantity | 6 back panel ports 4 ports for front daughter board 2 ports for 3.5" card reader module |

Environmental Requirements

| Item | Specification |
|----------------------|---|
| Temperature | |
| Operating | +5°C ~ +35°C |
| Non-operating | -20 ~ +60°C (Storage package) |
| Humidity | |
| Operating | 15% to 80% RH |
| Non-operating | 10% to 90% RH |
| Vibration | |
| Operating (unpacked) | 5 ~ 500 Hz: 2.20g RMS random, 10 minutes per axis in all 3 axes 5 ~500 Hz: 1.09g RMS random, 1 hour per axis in all 3 axes |

Power Management

| Devices | S1 | S3 | S4 | S5 |
|-----------------------|-----------|-----------|-----------|-----------|
| Power Button | V | V | V | V |
| USB Keyboard/Mouse | V | V | N/A | N/A |
| PME | Disabled | Disabled | Disabled | Disabled |
| RCT | Disabled | Disabled | Disabled | Disabled |
| WOR | Disabled | Disabled | Disabled | Disabled |

- *Devices wake up from S3 should be less than*
- *Devices wake up from S5 should be less than 10 seconds*

Power Management Function (ACPI support function)

Device Standby Mode

- ☐ Independent power management timer for hard disk drive devices (0-15 minutes, time step=1 minute).
- ☐ Hard disk drive goes into Standby mode (for ATA standard interface).
- ☐ Disable V-sync to control the VESA DPMS monitor.
- ☐ Resume method: device activated (Keyboard for DOS, keyboard & mouse for Windows).
- ☐ Resume recovery time: 3-5 sec.

Global Standby Mode

- ☐ Global power management timer (2-120 minutes, time step=10 minute).
- ☐ Hard disk drive goes into Standby mode (for ATA standard interface).
- ☐ Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- ☐ Resume method: Return to original state by pushing external switch button, modem ring in, keyboard and mouse for APM mode.
- ☐ Resume recovery time: 7-10 sec.

Suspend Mode

- ☐ Independent power management timer (2-120 minutes, time step=10 minutes) or pushing external switch button.
- ☐ CPU goes into SMM.
- ☐ CPU asserts STPCLK# and goes into the Stop Grant State.
- ☐ LED on the panel turns amber colour.
- ☐ Hard disk drive goes into SLEEP mode (for ATA standard interface).
- ☐ Disable H-sync and V-sync signals to control the VESA DPMS monitor.
- ☐ Ultra I/O and VGA chip go into power saving mode.
- ☐ Resume method: Return to original state by pushing external switch button, modem ring in, keyboard and mouse for APM mode.
- ☐ Return to original state by pushing external switch button, modem ring in and USB keyboard for ACPI mode.

ACPI

- ☐ ACPI specification 1.0b.
- ☐ S0, S1, S3 and S5 sleep state support.
- ☐ On board device power management support.
- ☐ On board device configuration support.

System Utilities

The manufacturer or the dealer already configures most systems. There is no need to run Setup when starting the computer unless you get a Run Setup message.

The Setup program loads configuration values into the battery-backed nonvolatile memory called CMOS RAM.

This memory area is not part of the system RAM.

NOTE: If you repeatedly receive Run Setup messages, the battery may be bad/flat. In this case, the system cannot retain configuration values in CMOS.

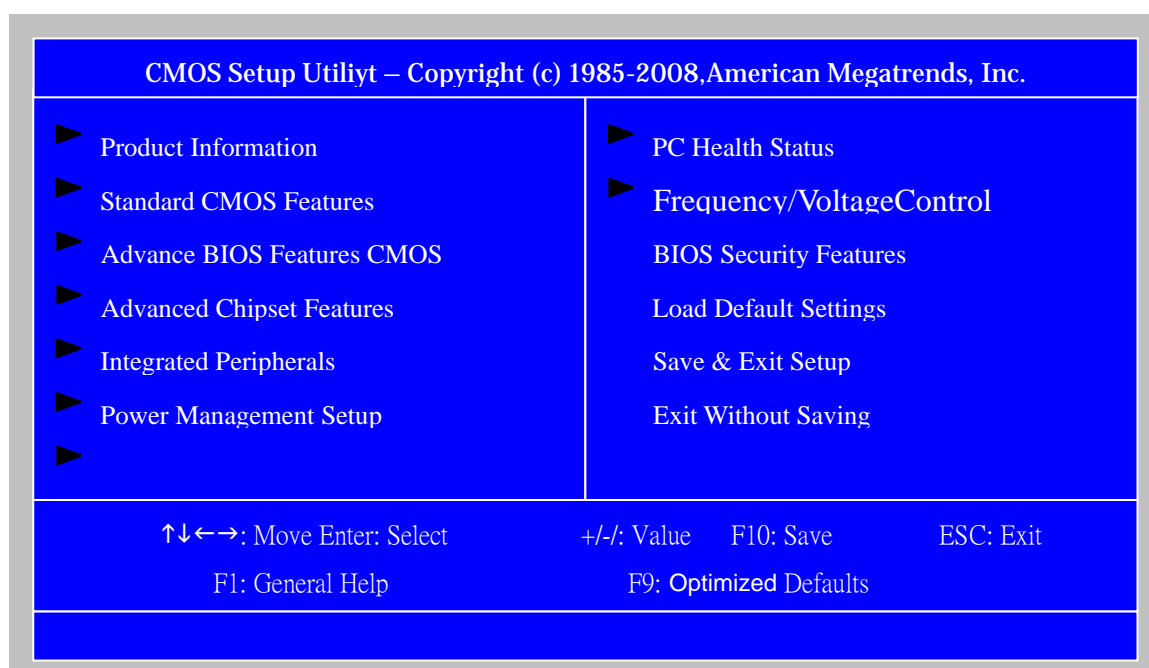
Before you run Setup, make sure that you have saved all open files. The system reboots immediately after you exit Setup.

Entering Setup

Power on the computer and the system will start POST (Power On Self Test) process. When the message of “Press DEL to enter SETUP” appears on the screen, press the key of [Delete] to enter the setup menu.

NOTE: If the message disappears before you respond and you still wish to enter Setup, restart the system by turning it OFF and On. You may also restart the system by simultaneously pressing [Ctrl+ Alt+ Delete].

The Setup Utility main menu then appears:

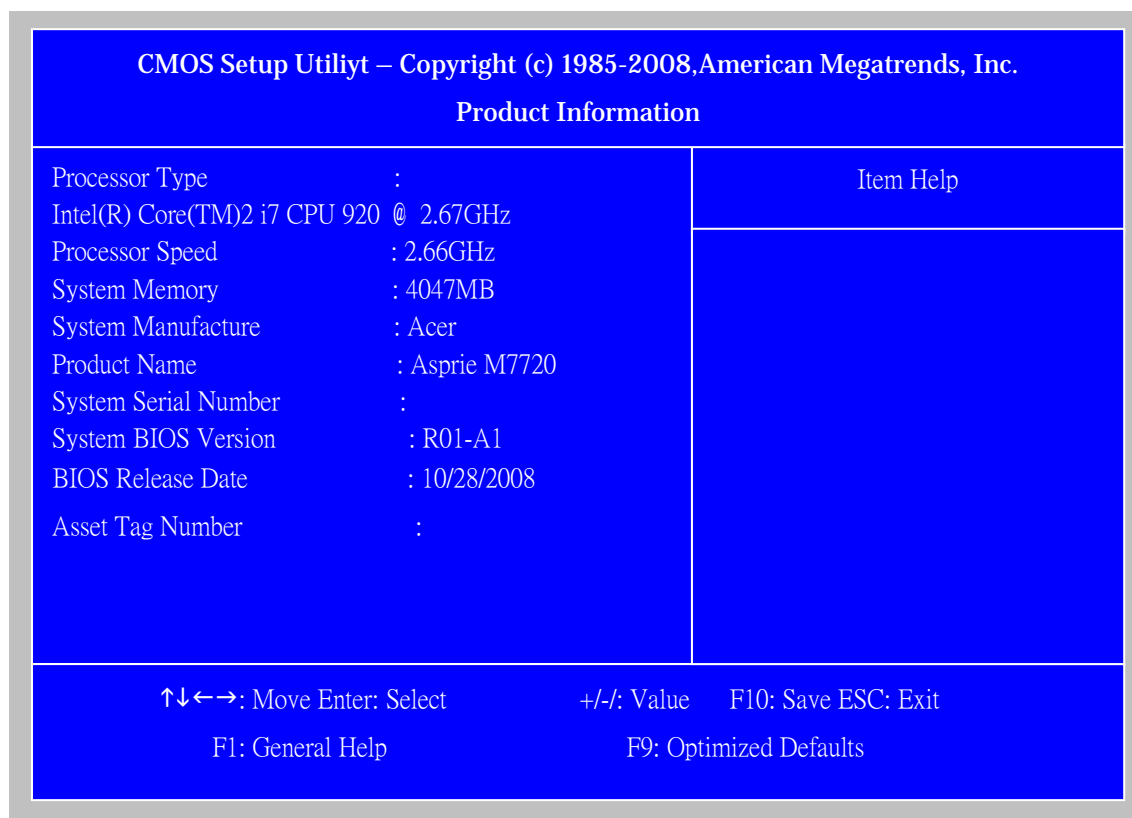


The items in the main menu are explained below:

| Parameter | Description |
|---------------------------|---|
| Production Information | This page shows the relevant information of the main board |
| Standard CMOS Features | This setup page includes all the items in standard compatible BIOS |
| Advance BIOS Features | This setup page includes all the items of Award special enhanced features |
| Advance Chipset Features | This setup page includes all advanced chipset features |
| Integrated Peripherals | This setup page includes all onboard peripherals |
| Power Management Setup | This setup page includes all the items of Green function features |
| PC Health Status | This setup page is the System auto detect Temperature, voltage, and fan speed |
| Frequency/Voltage Control | This setup page is the System Frequency/Voltage setup |
| BIOS Security Features | Change, set or disable password. It allows you to limit access to the System |
| Load Optimized Defaults | Load Optimized Settings Default Settings indicates the value of the system parameters which the system would be in best performance configuration |
| Save & Exit Setup | Save CMOS value settings to CMOS and exit setup |
| Exit Without Saving | Abandon all CMOS value changes and exit setup |

Product Information

The screen below appears if you select Product Information from the main menu: The Product Information menu contains general data about the system, such as the product name, serial number, BIOS version, etc. This information is necessary for troubleshooting (maybe required when asking for technical support).



The following table describes the parameters found in this menu:

| Parameter | Description |
|----------------------|--|
| Processor Type | This item lists the product processor model |
| Processor Speed | This item lists the processor frequency for the system |
| System Memory | Total memory size for the system |
| Product Name | This item lists the product name |
| Product Name | This item lists the system BIOS version |
| System Serial Number | This item lists the system serial number |
| System BIOS Version | This item lists the system BIOS version |
| BIOS Release Date | This item lists the BIOS release date |

Standard CMOS Setup

Select standard CMOS features from the main menu to configure some basic parameters in your system the following screen shows the standard CMOS features menu:

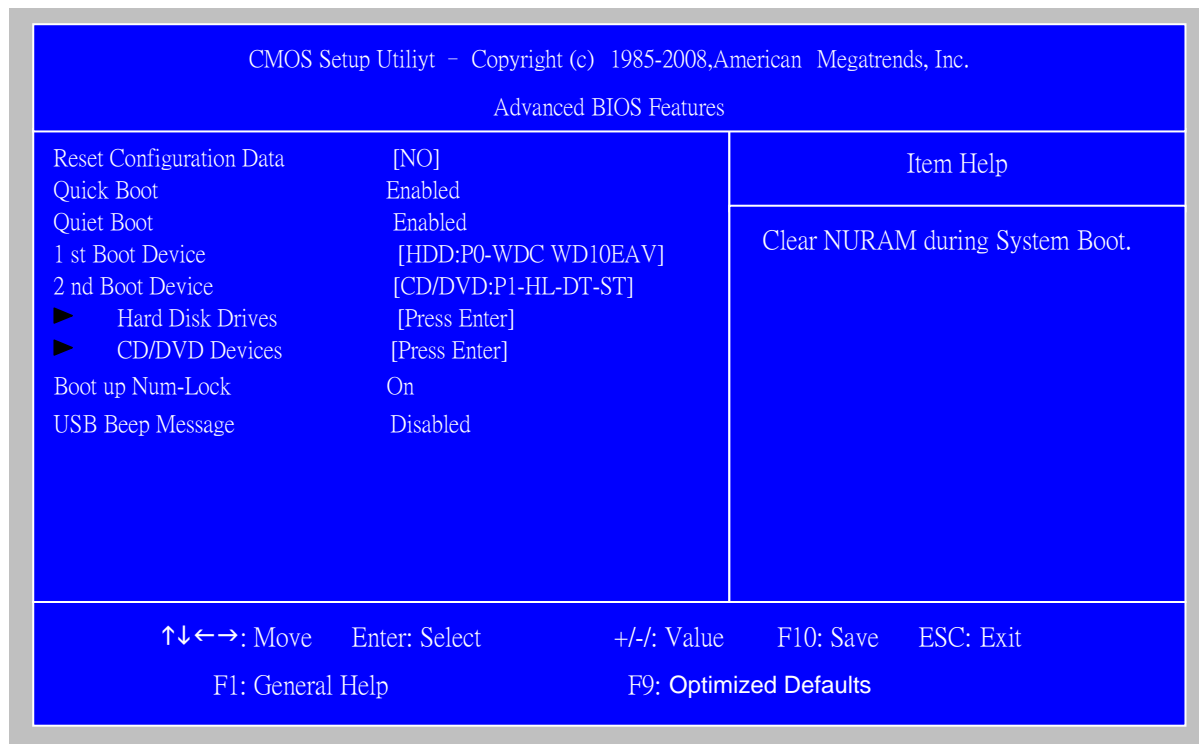
| CMOS Setup Utility – Copyright (c) 1985-2005,American Megatrends, Inc. | | |
|---|---------------------|--|
| Standard CMOS Features | | |
| System Time | [11:54:33] | Item Help |
| System Date | [Wed 11/26/2008] | |
| ▶ AHCI Port0 | [Not Detected] | Use [ENTER], [TAB] or [SHIFT-TAB] to select A field . Use [+] or [-] to configure system Time. |
| ▶ AHCI Port1 | [Not Detected] | |
| ▶ AHCI Port2 | [Not Detected] | |
| ▶ AHCI Port3 | [ATAPI CDROM] | |
| ▶ AHCI Port4 | [Not Detected] | |
| ▶ AHCI Port5 | [Hard Disk] | |
| Halt on Setting | [All, But Keyboard] | |
| ↑↓←→: Move ENTER: Select Item +/-: Value F10: Save ESC: Exit F1: General Help F9: Optimized Defaults | | |

The following table describes the parameters found in this menu.

| Parameter | Description | Options |
|-------------|---|---|
| System Date | To set the date following the weekday-month-date-year format | Week: From [Sun.] to [Sat.]. determined by BIOS and is display only Day: from [1] to [31] (or the maximum allowed in the month. Year: from 1999 to 2099 |
| System Time | To set the time following the hour-minute-second format | The items format is [hour] [minute][second]. The time is calculated base on the 24-hour timer clock. |
| Halt On | This item enables use to select the situation if the BIOS stops the POST process and the notification | All Errors No Errors All, But Keyboard All, But Diskette All, But Disk/Key |

Advanced Setup

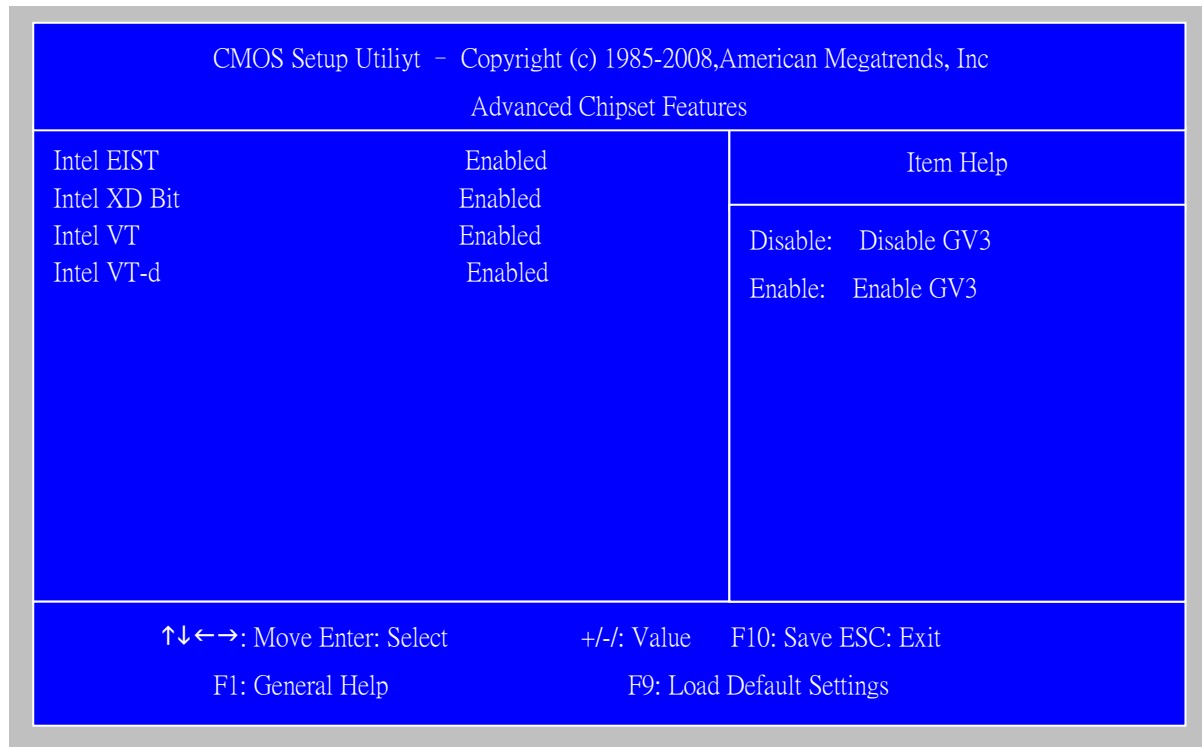
The following screen shows the Advanced Setup:



The following table describes the parameters found in this menu.

| Parameter | Description | Options |
|---------------------|---|-----------------------|
| Quick Boot | Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system | [Enabled], [Disabled] |
| 1 st Boot Device | The item allows you to see the sequence of boot device where BIOS attempts to load the disk operation system. | |
| 2 nd Boot Device | | |
| Hard Disk Drives | Specifies the boot device. Priority sequence from available Hard Drives | |
| CD/DVD Devices | | |
| Boot up Num-Lock On | Select Power-on state for Numlock | On, Off |
| USB Beep Message | Enables the beep during USB device enumeration | [Enabled], [Disabled] |

Advanced Chipset Setup



The following table describes the parameters found in this menu.

| Parameter | Description | Options |
|--------------|--------------------|------------------|
| Intel EIST | For Intel platform | Disabled/Enabled |
| Intel XD Bit | For Intel platform | Disabled/Enabled |
| Intel VT | For Intel platform | Disabled/Enabled |
| Intel VT-d | For Intel platform | Disabled/Enabled |

Integrated Peripherals

| | | |
|---|-------------|-----------|
| CMOS Setup Utility – Copyright (c) 1985-2008, American Megatrends, Inc. | | |
| Integrated Peripherals | | |
| Onboard SATA Mode | [AHCI] | Item Help |
| Onboard ESATA Controller | [AHCI Mode] | |
| Onboard USB Controller | [Enabled] | |
| Legacy USB Support | [Enabled] | Options |
| Onboard LAN Controller | [Enabled] | |
| Onboard LAN Option ROM | [Disabled] | IDE |
| Onboard Audio Controller | [Enabled] | RAID |
| Onboard 1394 Controller | [Enabled] | AHCI |
| Serial Port1 Address | [3F8/IRQ4] | |
| ↑↓←→: Move Enter: Select +/-: Value F10: Save ESC: Exit | | |
| F1: General Help F9: Optimized Defaults | | |

The following table describes the parameters found in this menu.

| Parameter | Description | Options |
|--------------------------|---|--|
| Onboard SATA Mode | This item is only available when onboard SATA controller is AHCI | AHCI Disabled / AHCI |
| Onboard ESATA Mode | This item is only available when onboard ESATA controller is AHCI Mode. | Disabled/AHCI Mode |
| Onboard USB Controller | Always enabled USB keyboard during POST no matter what option is set | Disabled/Enabled |
| Legacy USB Support | This item is only available when on board USB controller is enabled | Disabled/Enabled |
| Onboard Audio Controller | Always enabled Audio POST no matter what option is set | Disabled/Enabled |
| Onboard LAN Controller | Always enabled Audio POST no matter what option is set | Disabled/Enabled |
| Onboard LAN Option ROM | This item is only available when onboard LAN controller is enabled | Disabled/Enabled |
| Serial Port1 Address | Allows BIOS to select serial port1 base addresses | Disabled / 3F8/IRQ4 / 2F8/IRQ3 / 3E8/IRQ4 / 2E8/IRQ3 |

Power Management

The Power Management menu lets you configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use. The following screen shows the Power Management parameters and their default settings:

CMOS Setup Utility – Copyright (c) 1985-2008, American Megatrends, Inc

Power Management Setup

| | | |
|--------------------------|--------------|----------------------------------|
| ACPI Aware O/S | [Yes] | Item Help |
| ACPI Suspend Mode | [S3 (STR)] | |
| Power On by RTC Alarm | [Disabled] | Yes/ No |
| Power On by PCIE Devices | [Disabled] | ACPI support for |
| Power On by Modem Ring | [Disabled] | Operating System. |
| Power On By Onboard Lan | [Disabled] | |
| Wake Up by PS/2 KB/Mouse | [Enabled] | Yes: If OS supports ACPI. |
| Wake Up by USB KB//Mouse | [Enabled] | No: If OS does not support ACPI. |
| Restore On AC Power Loss | [Last State] | |

↑↓←→: Move Enter: Select
+/-: Value
F10: Save
ESC: Exit

F1: General Help
F9: Optimized Defaults

The following table describes the parameters found in this menu.

| Parameter | Description | Options |
|--------------------------|---------------------------------------|------------------|
| ACPI Aware O/S | Control wake up event for S1/S3/S4/S5 | No/Yes |
| ACPI Suspend Mode | | S1(POS)/S3 (STR) |
| Power On by RTC Alarm | | Disabled/Enabled |
| Power On by PCIE Devices | | Disabled/Enabled |
| Power On by Onboard Lan | | |
| Power On by Modem Ring | | Disabled/Enabled |
| Wake Up by PS/2 KB/Mouse | Control wake up event for S1/S3 | Disabled/Enabled |
| Wake Up by USB KB//Mouse | | Disabled/Enabled |

PC Health Status

| CMOS Setup Utility – Copyright (c) 1985-2008,American Megatrends, Inc. | | |
|---|--------------|--------------------------------|
| PC Health Status | | |
| CPU Temperature (PECI Mode) | : 35°C/95°F | Item Help |
| System Temperature | : 46°C/114°F | Fan configuration mode setting |
| CPU Fan Speed | : 1383 RPM | |
| System Fan Speed | : 1046 RPM | |
| CPU Core | : 1.120V | |
| +1.1V | : 1.152V | |
| +3.30V | : 3.277V | |
| +5.00V | : 4.924V | |
| +12.0V | : 11.9604V | |
| 5VSB | : 5.053V | |
| VBAT | : 3.230V | |
| Smart Fan | [Enabled] | |
| ↑↓←→: Move Enter: Select +/-: Value F10: Save ESC: Exit F1: General Help F9: Optimized Defaults | | |

The following table describes the parameters found in this menu:

| Parameter | Description | Options |
|----------------------------|---|---------|
| CPU/System Temperature | Detect CPU Temperature automatically | |
| CPU/SYSTEM FAN Speed (RPM) | Detect CPU/SYSTEM Fan Speed Status automatically | |
| CPU Smart FAN Control | The item displays the system Smart Fan Function status. It is always enabled by system. | |

Frequency/Voltage Control

| CMOS Setup Utility – Copyright (c) 1985-2008, American Megatrends, Inc | | |
|---|---------|----------------------------|
| Frequency/Voltage Control | | |
| Spread Spectrum | Enabled | Item Help |
| | | Spread spectrum modulation |
| ↑↓←→: Move Enter: Select +/-: Value F10: Save ESC: Exit F1: General Help F9: Optimized Defaults | | |

The following table describes the parameters found in this menu:

| Parameter | Description | Options |
|-----------------|------------------------------------|------------------|
| Spread Spectrum | Always auto detect Spread Spectrum | Disabled/Enabled |

BIOS Security Features

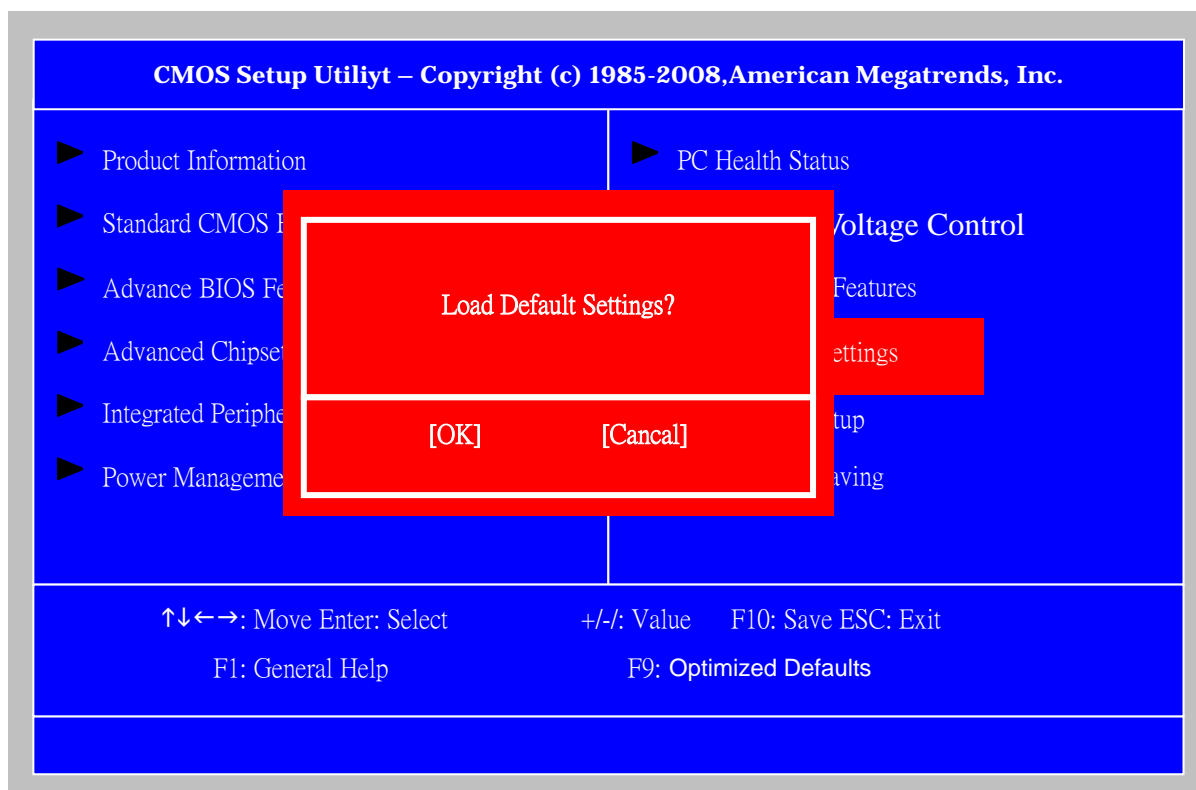
| CMOS Setup Utility – Copyright (c) 1985-2008, American Megatrends, Inc. | | |
|---|-----------------|--------------------------------|
| BIOS Security Features | | |
| Supervisor Password | : Not installed | Item Help |
| User Password | : Not Installed | Install or Change the Password |
| Change Supervisor Password | [Press Enter] | |
| ↑↓←→: Move Enter: Select +/-: Value F10: Save ESC: Exit F1: General Help F9: Optimized Defaults | | |

The following table describes the parameters found in this menu:

| Parameter | Description | Options |
|----------------------------|--|-------------|
| Change Supervisor Password | This item is only available when supervisor password is installed, If clear supervisor password, user password should also be cleared. All setup items will be view-only except user password item when login with user password | Press Enter |

Load Default Settings

This option opens a dialog box that lets you install defaults for all appropriate items in the Setup Utility.

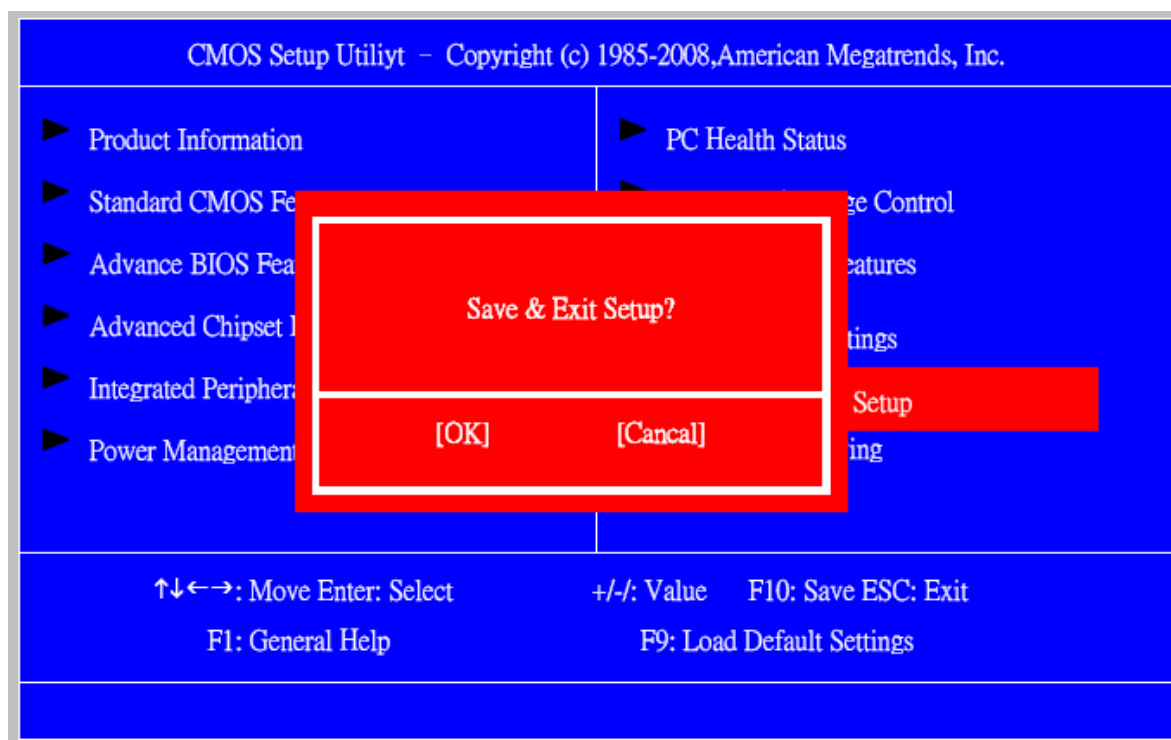


The following table describes the parameters found in this menu:

| Parameter | Description | Options |
|-----------------------|--|---------|
| Load Default Settings | Select the field loads the factory defaults for BIOS and Chipset Features, which the system automatically detects. This option opens a dialog box that lets you install optimized defaults for all appropriate items in the Setup Utility. | |

Save & Exit Setup

Highlight this item and press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility.

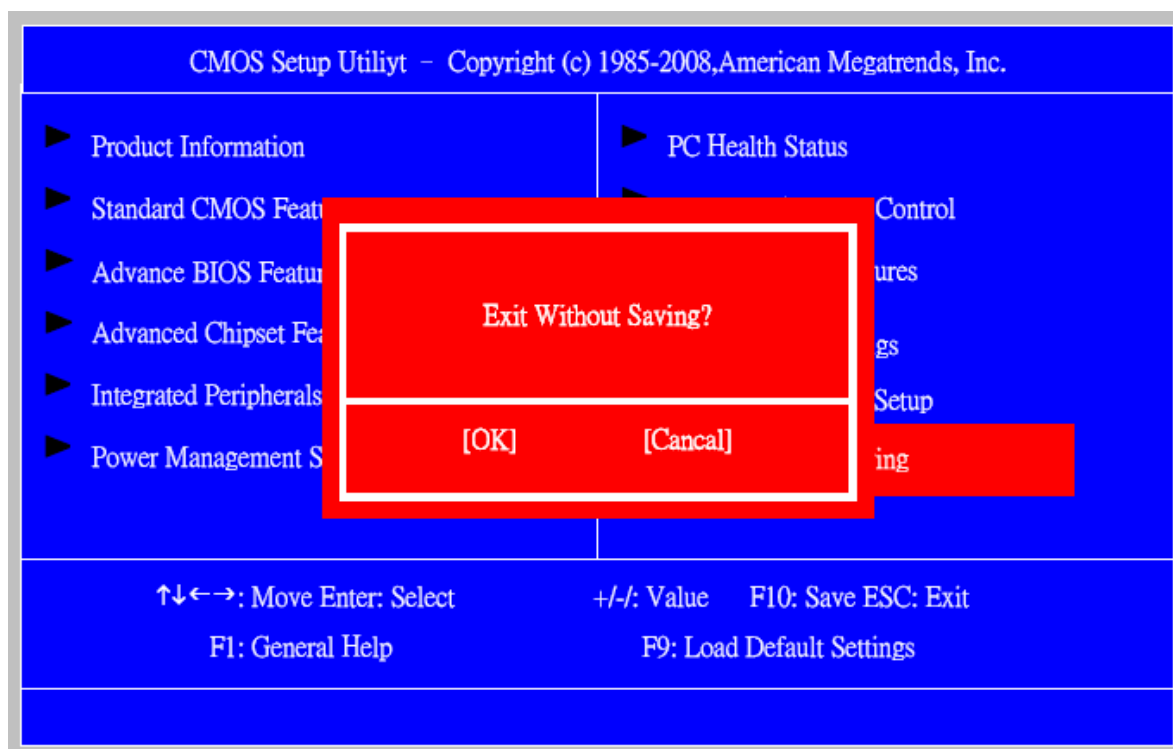


The following table describes the parameters found in this menu:

| Parameter | Description | Options |
|-------------------|---|---------|
| Save & Exit Setup | Press <Enter> to save the changes that have made in the Setup Utility and exit the Setup Utility. Press<Y> to save and Exit or <N> to return to the main menu. | |

Exit Without Saving

Highlight this item and press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility.



| Parameter | Description | Options |
|---------------------|--|---------|
| Exit Without Saving | Press<Enter> to discard any changes and exit the Setup Utility | |

Machine Disassembly and Replacement

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge.

- Wire cutter.

- Phillips screwdriver (may require different size).

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatches when putting back the components.

General Information

Before You Begin

Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system

Disassembly Procedure

This section tells you how to disassemble the system when you need to perform system service. Please also refer to the disassembly video, if available.

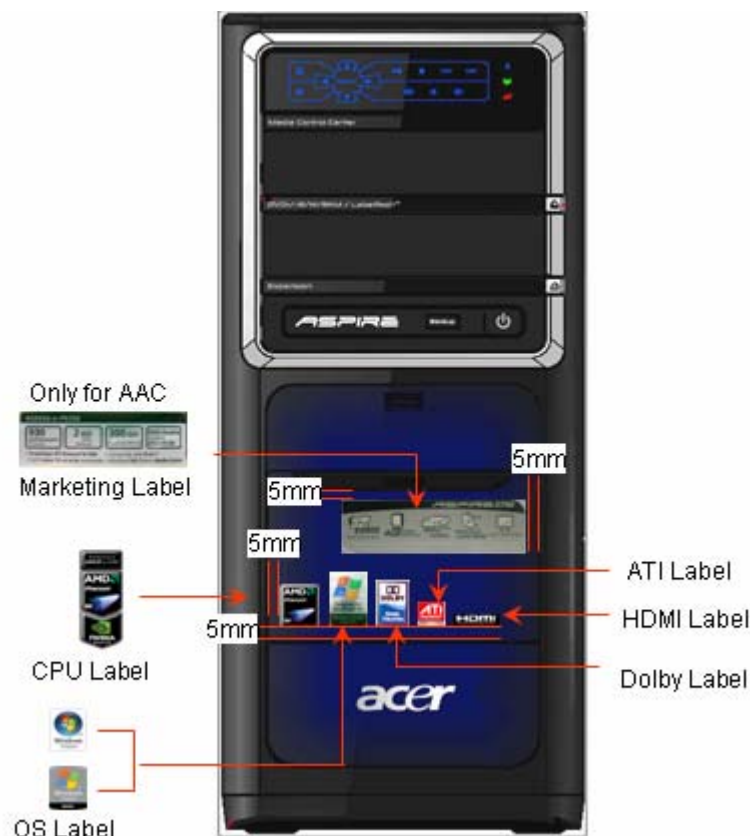
CAUTION: Before you proceed, make sure you have turned off the system and all peripherals connected to it.

Bulldog ASM7720 Standard Disassembly

Process Bezel

Process:

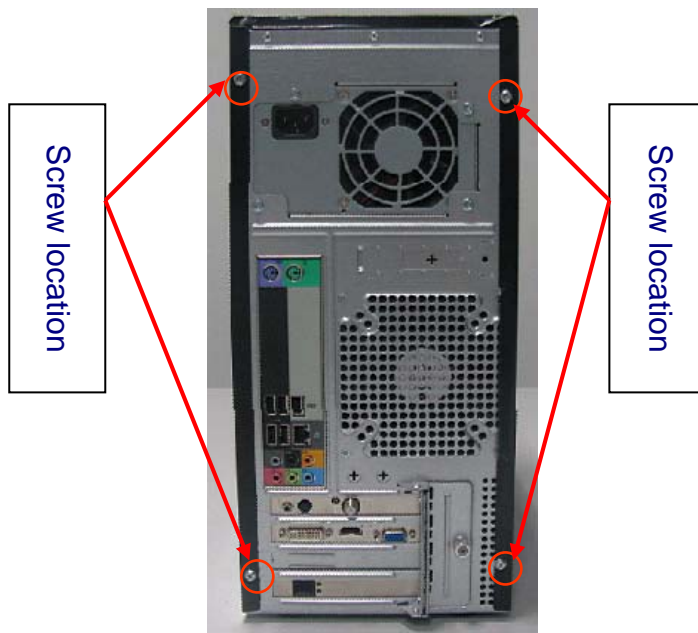
1. According to the requirement, paste ATI, OS, CPU, HDMI and marketing label by SKU.



Remove side cover

Process:

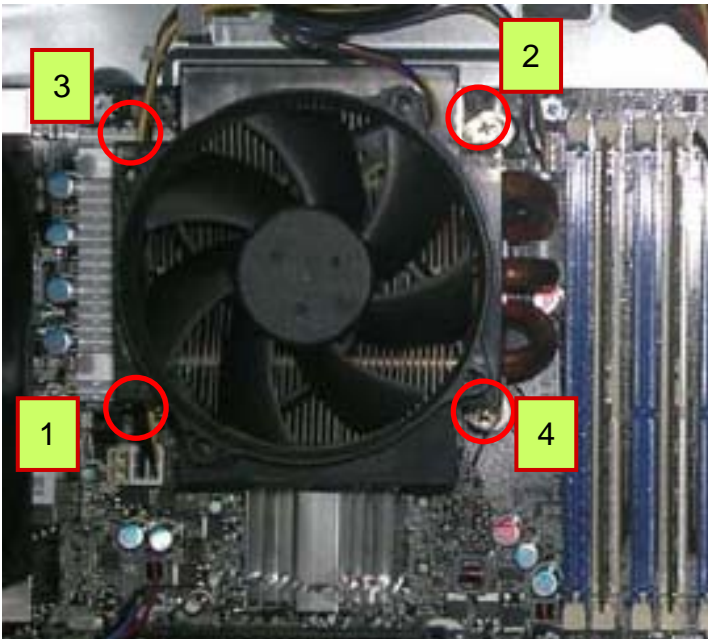
1. Put the Computer on the worktable lightly.
2. Release left/right side cover with 4 screws then remove left/right side cover.



Remove CPU fan pipe

Process:

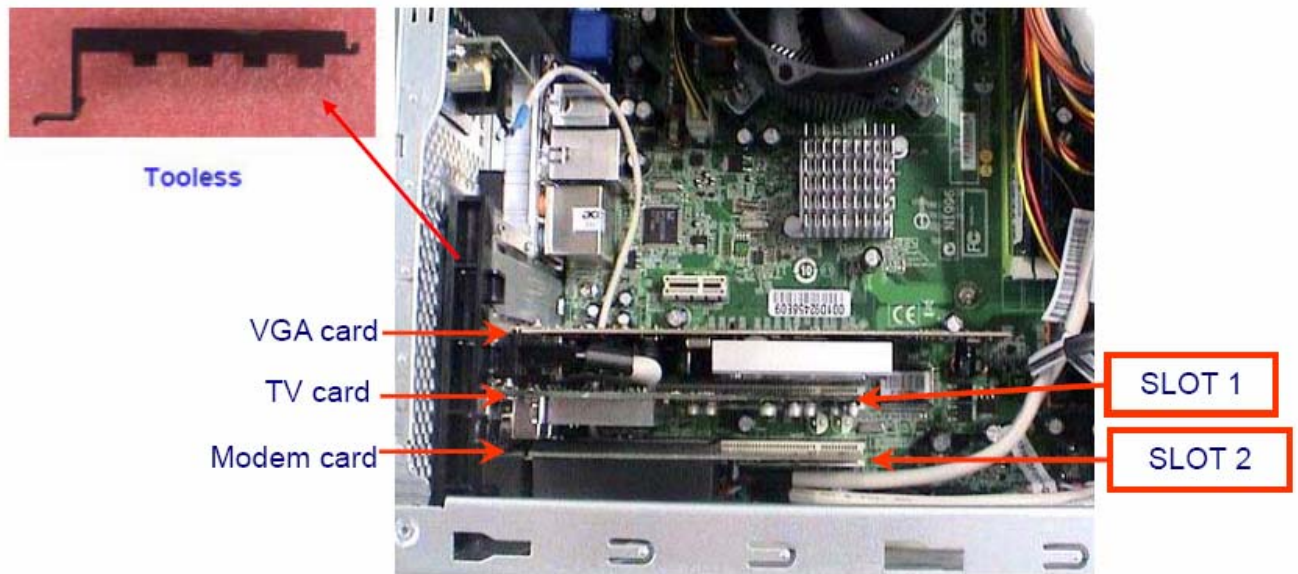
1. Release the CPU fan pipe.



Remove Cards

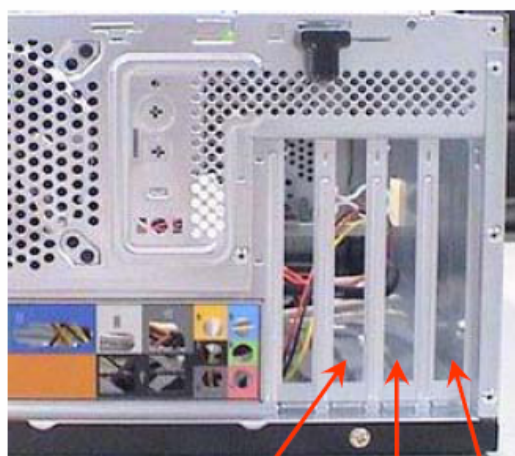
Process:

1. Release the slot cover tooless
2. Remove VGA 、TV、 Modem Card,the following list is for your reference about the mutual location relation (Optional by SKU).



Notice:

- I. Remove card, don't touch any electric parts on PCB.



VGA card

TV card

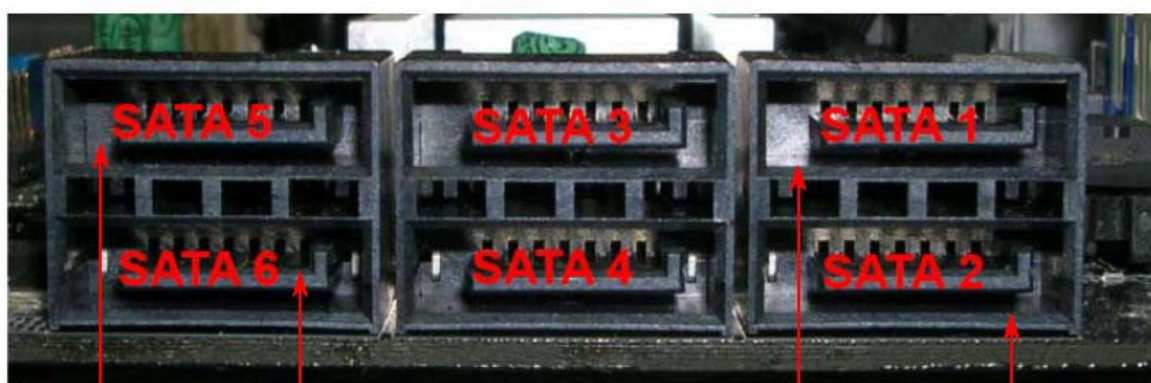
Modem card

| Slot 1 | Slot 2 |
|----------------|---------------|
| TV Card | N |
| N | Modem Card |
| 1394 Card | N |
| Lan Card | N |
| TV Card | Modem Card |
| TV Card | 1394/Lan Card |
| 1394 /Lan card | Modem Card |
| Lan Card | 1394 Card |

Remove HDD Data Cables

Process:

1. Remove master HDD data cable from M/B SATA1/SATA3(Optional by SKU).
2. Remove slave ODD data cable from M/B SATA2/SATA4(Optional by SKU)

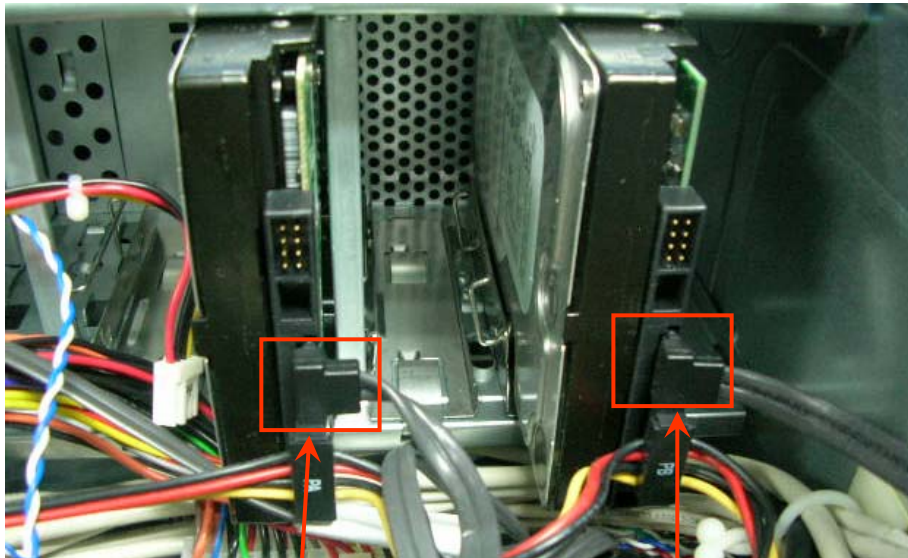


Removable
SATA HDD data
cable1 in port 5

Removable
SATA HDD data
cable2 in port 6

Master SATA
HDD data
cable1 in port 1

Master SATA
ODD data
cable1 in port 2



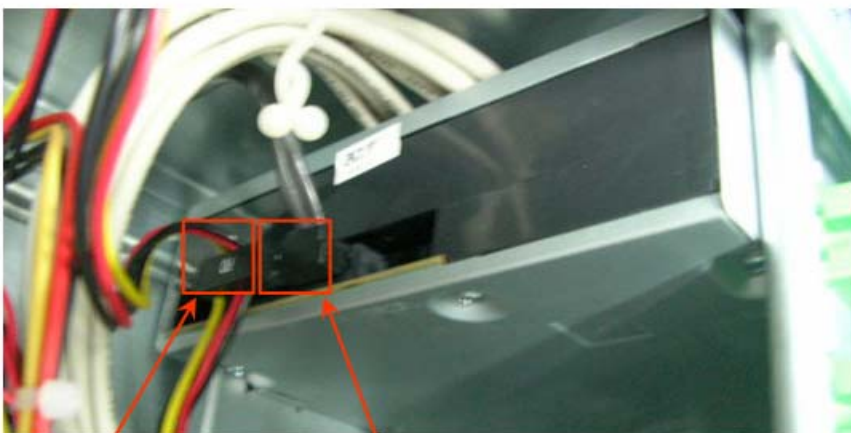
Remove slave HDD cable

Remove master HDD cable

Remove ODD DATA cable

Process:

1. Remove master ODD data/power cable from Master ODD.



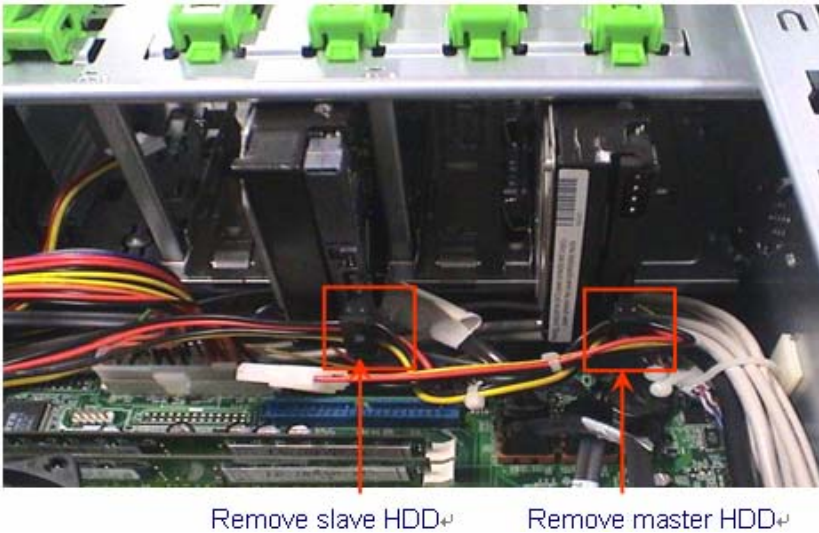
Remove master ODD
Power Cable

Remove master
ODD Data Cable

Remove HDD power cable

Process:

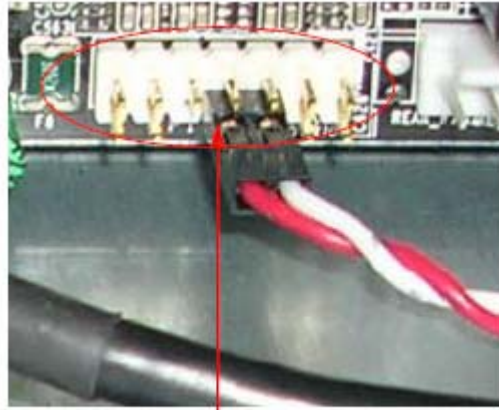
1. Remove master HDD data cable from master HDD.
2. Remove slave HDD data cable from slave HDD.



Remove Cables

Process:

1. Remove Power SW cable cable from M/B.
2. Remove FI/O USB cable from M/B.
3. Remove MCR USB cable from M/B.
4. Remove Card reader cable from M/B.
5. Remove audio cable from the “AUDIO” port on M/B.



Power SW
cable location



Media Card
Reader cable

MCI cable

MCR USB
cable

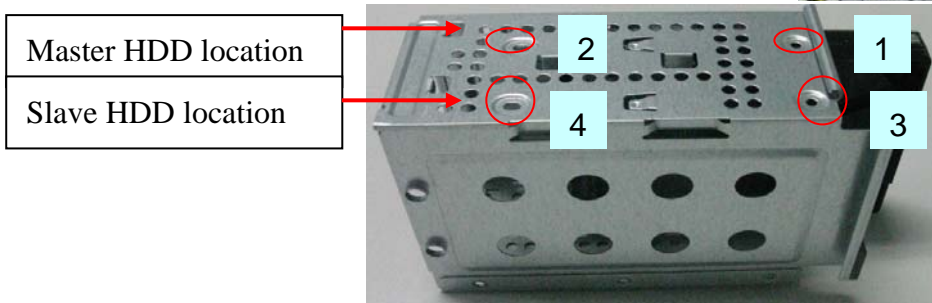
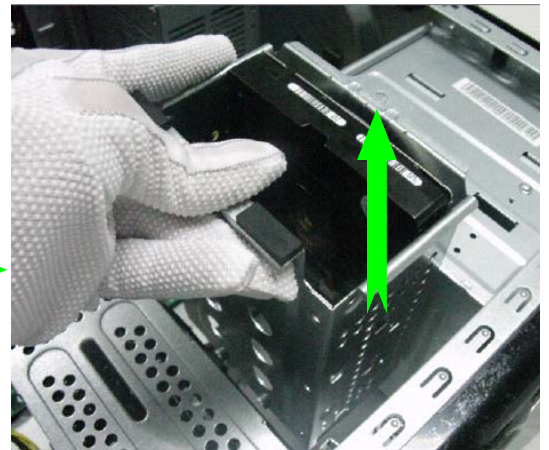
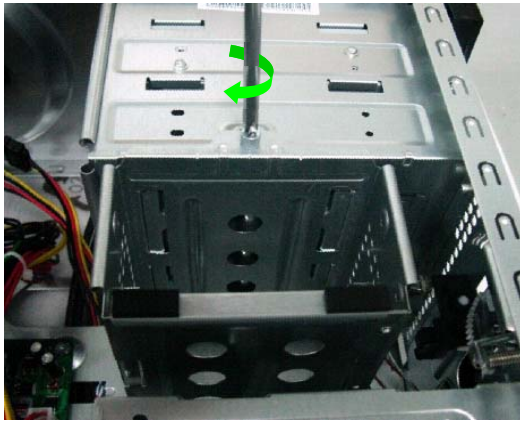
F/I/O USB cable

Cable clip the Audio,
MCR,MCI, F/I/O 1394 &
cables

Remove HDD

Process:

1. Remove the screws and take out HDD bracket .
2. Remove two sides with 2 screws for each and then remove the master HDD and Slave HDD.
3. Remove Slave HDD from the second HDD location. (Optional by SKU)

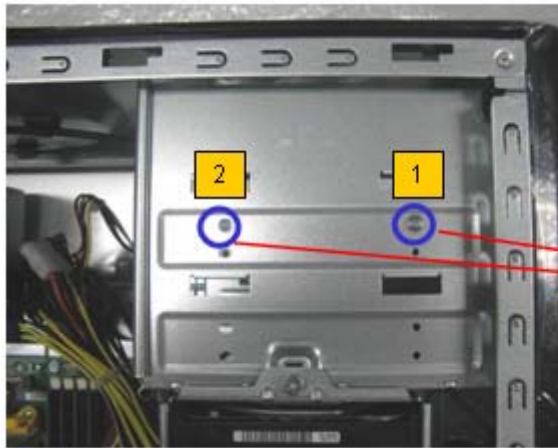


Remove ODD

Process:

1. Remove bezel of chassis.
2. Remove Master ODD from the location.
3. Remove slave ODD from the location. (Optional by SKU)

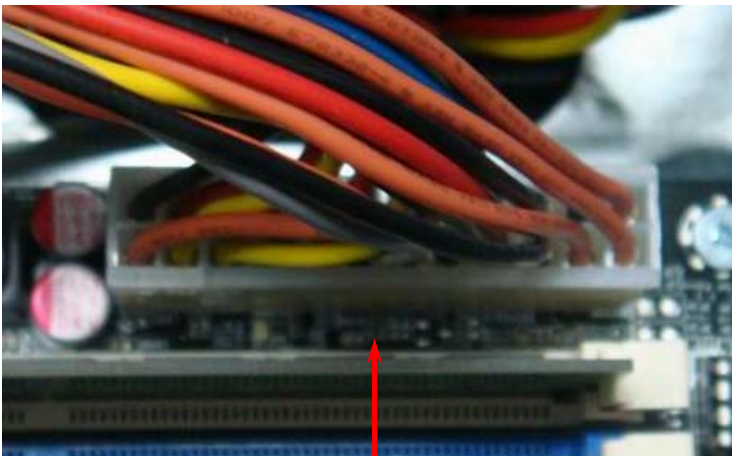




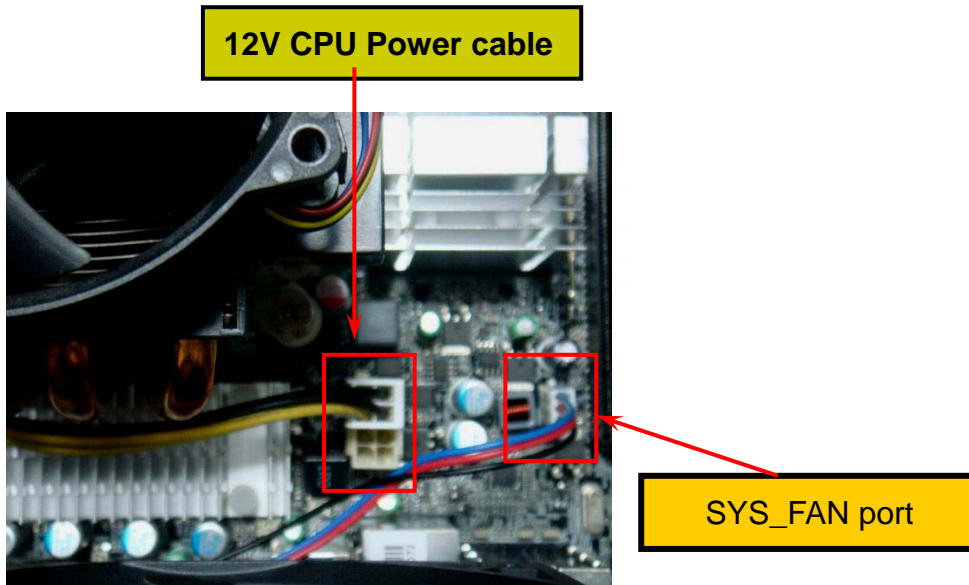
Remove Cables

Process:

1. Remove M/B power cable from M/B “ATX1”.
2. Remove 12 V power cable from M/B” JPW1”
3. Remove System Fan cable from M/B”SYS-F2”.



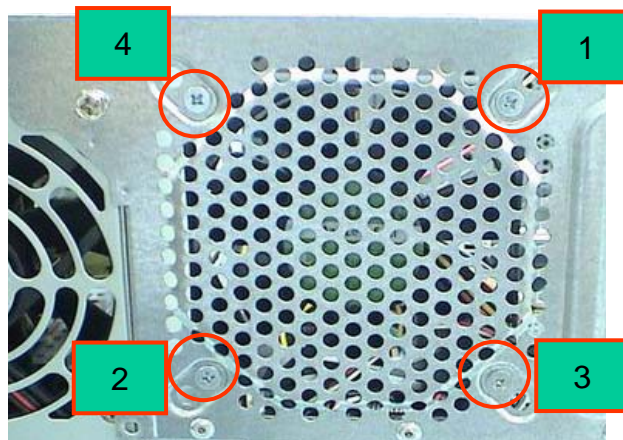
M/B power cable



Remove System FAN

Process:

1. Release four screws according to the following picture.
2. Remove Sys Release four screws. FAN (Optional by SKU)



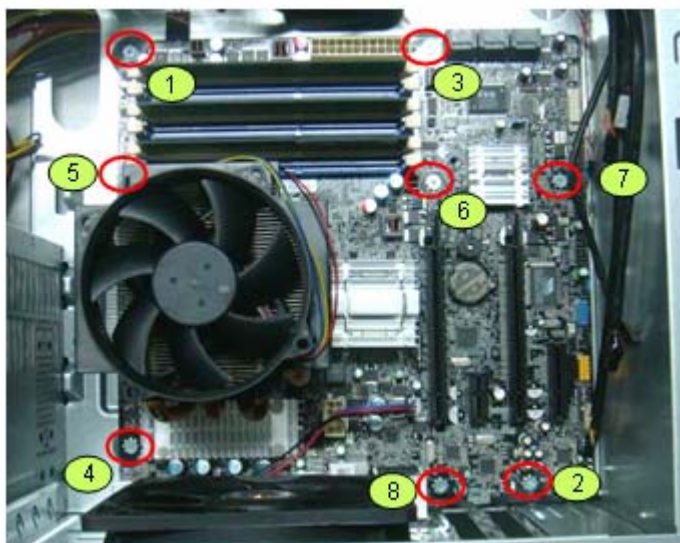
- The direction of System FAN



Remove mother board

Process:

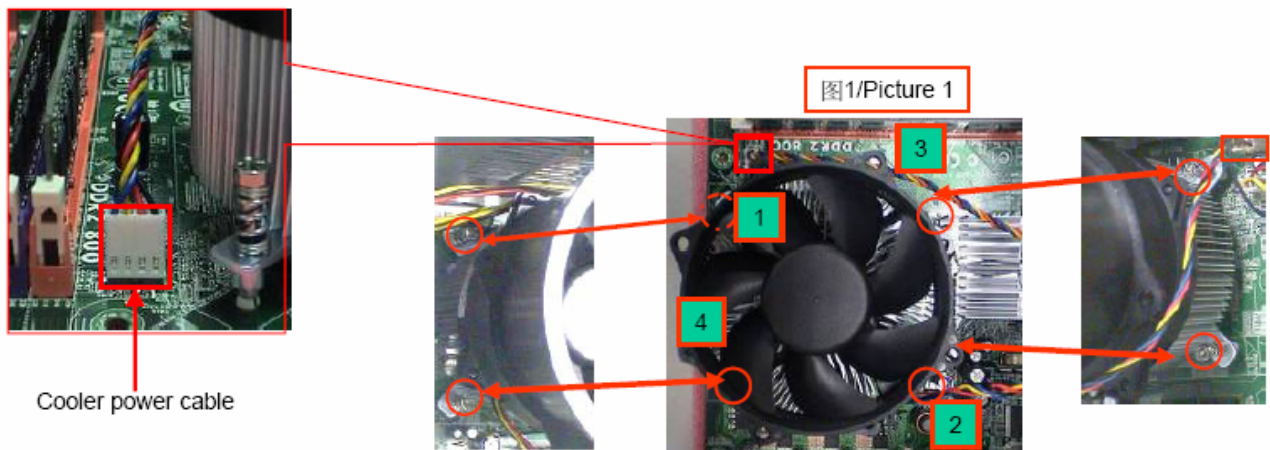
1. Release 8 pcs screws form the corresponding hole.
2. Release screws according to the following picture in turn.
3. Remove the Mother board from chassis.



Remove CPU cooler

Process:

1. Remove cooler power cable from M/B “CPU-F2”.
2. Release screw 1 first, then fixes screw 2, screw 3 & screw 4 (As Picture). Remove Cooler from the Retention module.



Remove memory

Process:

1. Remove the first Memory from DIMM.
2. Remove the second Memory from DIMM2 (Optional by SKU).

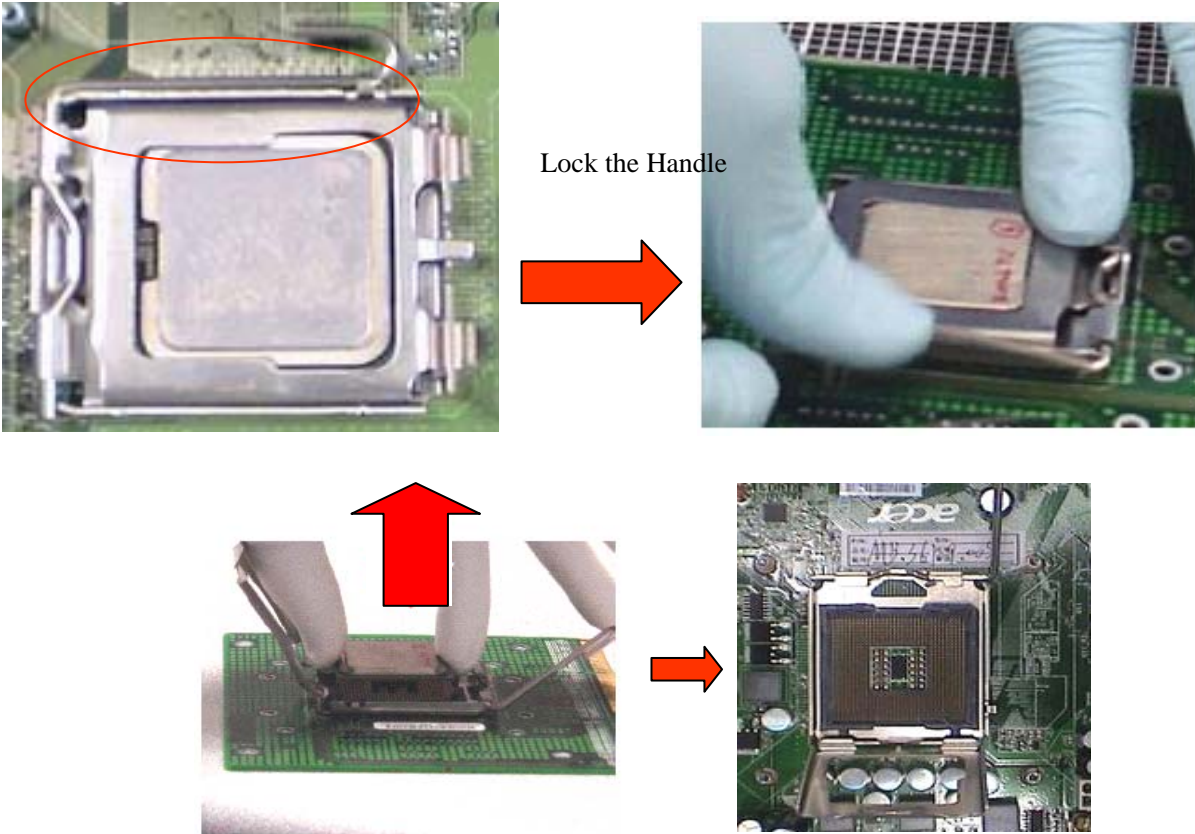


| DIMM 1 | DIMM 2 | DIMM 3 | DIMM 4 | DIMM 5 | DIMM 6 |
|--------|--------|--------|--------|--------|--------|
| A | | | | | |
| A | B | | | | |
| A | | A | | A | |
| B | A | B | | | |
| A | B | A | | | |
| A | B | A | B | C | C |

Remove CPU

Process:

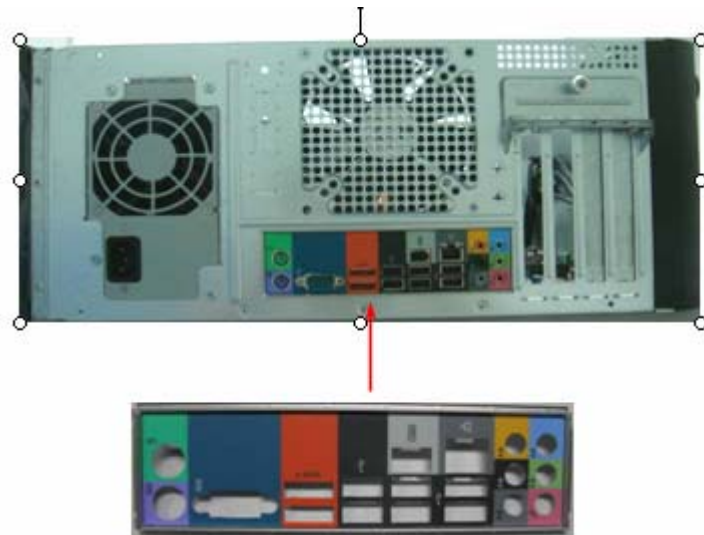
1. Remove CPU according following the pictures.



Remove I/O shielding

Process:

1. Remove I/O Shielding.



Troubleshooting

Please refer to generic troubleshooting guide for troubleshooting information relating to following topics:

- ☐ Power-On Self-Test (POST)
- ☐ POST Check Points
- ☐ POST Error Messages List
- ☐ Error Symptoms List


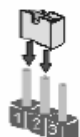
Jumper and Connector Information

Jumper Setting


This section explains how to set jumpers for correct configuration of the mainboard.

Setting Jumper

Use the motherboard jumpers to set system configuration options. Jumpers with more than one pin are numbered. When setting the jumpers, ensure that the jumper caps are placed on the correct pins.

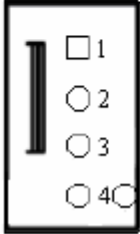
| Description | Illustration |
|--|---|
| The illustrations show a 2-pin jumper. When the jumper cap is placed on both pins, the jumper is SHORT. If you remove the jumper cap, or place the jumper cap on just one pin, the jumper is OPEN. |  SHORT OPEN |
| This illustration shows a 3-pin jumper. Pins 1 and 2 are SHORT |  |

Clear CMOS

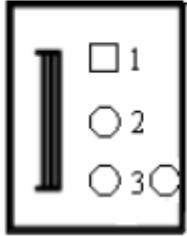
| Jumper | Type | Description | Setting(Default) | Illustration |
|----------|-------|-------------|--|---|
| CLR_CMOS | 3-pin | CLEAR CMOS | 1-2 : Clear 2-3 : Normal Before clearing the CMOS,make sure to turn off the system | Clear CMOS  1 |

Checking Connector

CPU_FAN: CPU Cooling Fan Connector

| | Pin | Signal Name | Function |
|---|-----|-------------|--------------------|
|  | 1 | GND | System Ground |
| | 2 | +12V | Power +12V |
| | 3 | Sense | Sensor |
| | 4 | Control | FAN Control Signal |

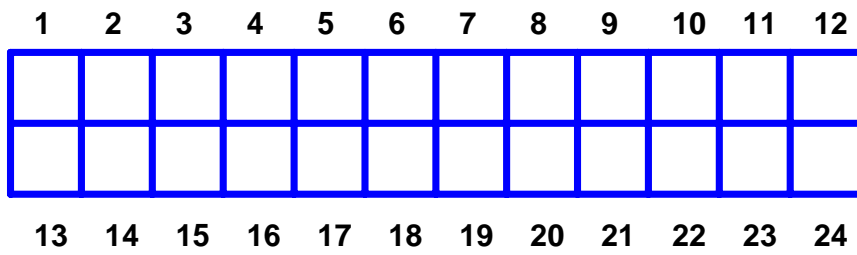
SYS_FAN/PWR_FAN: FAN Power Connectors

| | Pin | Signal Name | Function |
|--|-----|-------------|---------------|
|  | 1 | GND | System Ground |
| | 2 | +12V | Power +12V |
| | 3 | Sense | Sensor |

ATX12V: ATX 12V Power Connector

| Pin | Signal Name |
|-----|-------------|
| 1 | Ground |
| 2 | Ground |
| 3 | +12V |
| 4 | +12V |

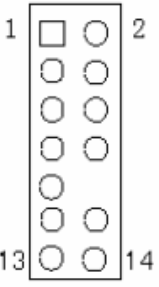
ATX_POWER: ATX 24-pin Power Connector



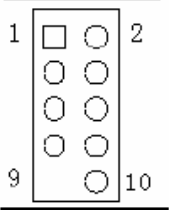
| Pin | Signal Name | Pin | Signal Name |
|-----|-------------|-----|-------------|
| 1 | +3.3 | 13 | +3.3V |
| 2 | +3.3 | 14 | -12V |
| 3 | COM | 15 | COM |
| 4 | +5V | 16 | PS_ON |
| 5 | COM | 17 | COM |
| 6 | +5V | 18 | COM |
| 7 | COM | 19 | COM |
| 8 | PWR OK | 20 | -5V |
| 9 | 5VSB | 21 | +5V |
| 10 | +12V | 22 | +5V |
| 11 | +12V | 23 | +5V |
| 12 | +3.3V | 24 | COM |

Front Panel Header

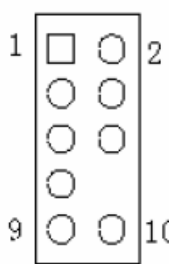
The front panel header (PANEL1) provides a standard set of switch and LED connectors commonly found on ATX or Micro ATX cases. Refer to the table below for information:

| Illustration | Pin | Signal | Pin | Signal |
|---|-----|--------------|-----|----------------|
|  | 1 | 5V_SYS | 2 | GPIO_GRN_HDR_R |
| | 3 | HDD_LED_R | 4 | GPIO_YLW_HDR_R |
| | 5 | GND | 6 | PSIN |
| | 7 | ICH_SYS_RSTJ | 8 | GND |
| | 9 | 5V_SYS | 10 | KEY |
| | 11 | NC | 12 | 5V_SB |
| | 13 | NC | 14 | LAN_ACTJ |

Front USB

| Illustration | Pin | Signal | Function | Pin | Signal | Function |
|---|-----|-----------------|--|-----|-----------------|--|
|  | 1 | VREG_FP_USBPWR0 | Front panel USB power(Ports 0,1) | 2 | VREG_FP_USBPWR0 | Front panel USB power(Ports 0,1) |
| | 3 | USB_FP_P0- | Front panel USB Port 0 Negative Signal | 4 | USB_FP_P1- | Front panel USB Port 1 Negative Signal |
| | 5 | USB_FP_P0+ | Front panel USB Port 0 Positive Signal | 6 | USB_FP_P1+ | Front panel USB Port 1 Positive Signal |
| | 7 | GROUND | | 8 | GROUND | |
| | 9 | KEY | | 10 | GROUND | |

Front Audio

| Illustration | Pin | Signal Name | Pin | Signal Name |
|---|-----|----------------|-----|----------------|
|  | 1 | MIC2-L | 2 | AUD_GND |
| | 3 | MIC2-R | 4 | AUD_PRESENCE_L |
| | 5 | LINE2-R | 6 | MIC2-JD |
| | 7 | FRONT-IO-SENSE | 8 | KEY |
| | 9 | LINE2-L | 10 | LINE2-JD |

Intruder

| Pin | Signal Name | Pin | Signal Name |
|-----|-------------|-----|-------------|
| 1 | INTRUDERJ | 2 | GROUND |

J3(for requested)

| Pin | Signal Name | Pin | Signal Name |
|-----|-------------|-----|-------------|
| 1 | AGPIO1 | 2 | GROUND |

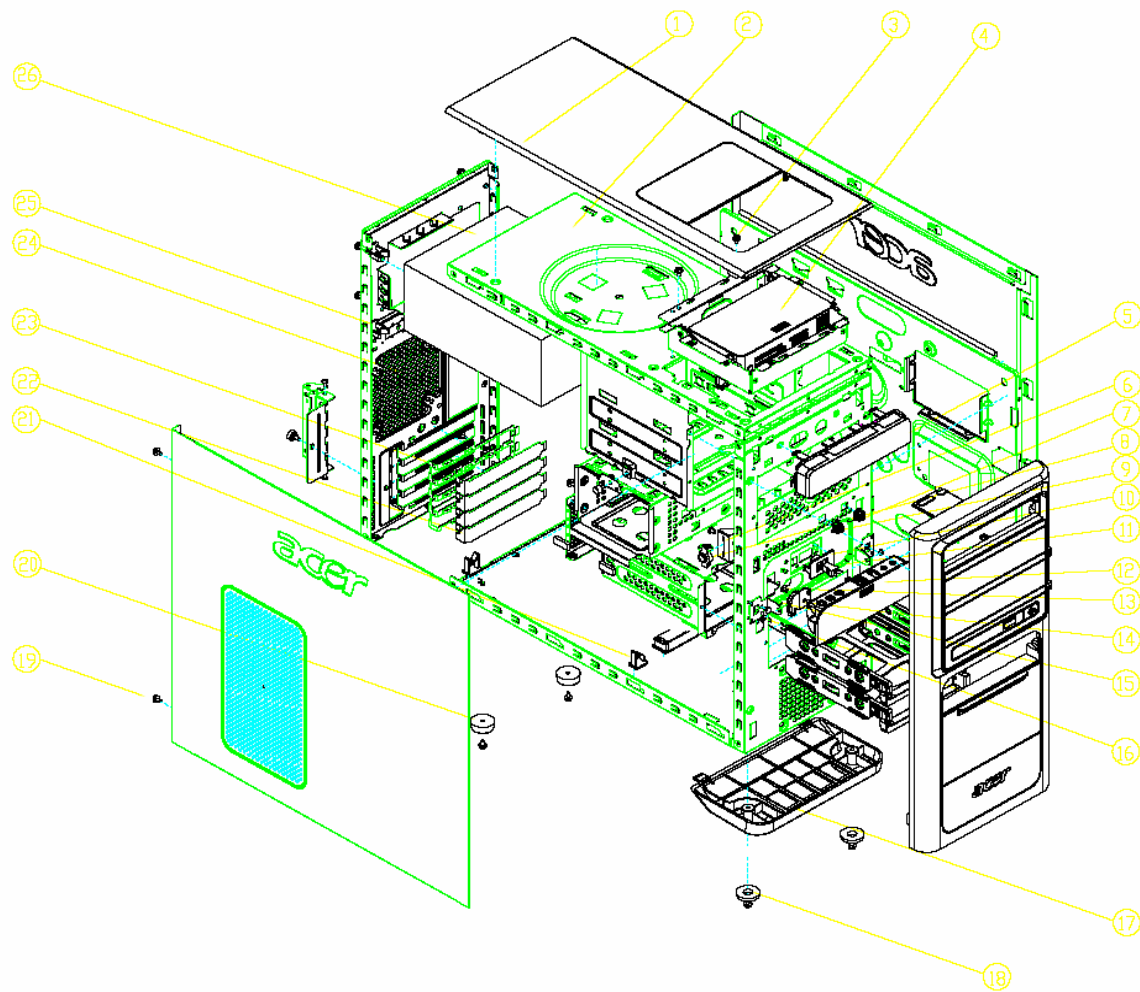
J4(for requested)

| Pin | Signal Name | Pin | Signal Name |
|-----|-------------|-----|-------------|
| 1 | AGPIO2 | 2 | GROUND |

FRU (Field Replaceable Unit) List

This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of **Aspire ASM7720**. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

NOTE: Please note WHEN ORDERING FRU PARTS, that you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted in the printed Service Guide. For ACER-AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code to those given in the FRU list of this printed Service Guide. You **MUST** use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.



| NO | DESCRIPTION | NO | DESCRIPTION |
|----|--------------------------|----|------------------------|
| 1 | TOP PLASTIC | 14 | FIO-RACK |
| 2 | 1-TOP-PLATE | 15 | FRONT-AXES |
| 3 | SCREW | 16 | STANDOFF-A |
| 4 | CARD READ ASSY | 17 | BASE BEZEL FOR ACER |
| 5 | MCI ASSY | 18 | RUBBER-FOOT(FRONT) |
| 6 | GEAR-BKT | 19 | SCREW |
| 7 | POWER SWITCHWITH CABLE | 20 | RUBBER-FOOT(BACK) |
| 8 | GEAR(PG-08A-45W) | 21 | GLIP CLAMP CHF-B-3M |
| 9 | BACKUP SWITCH WITH CABLE | 22 | PLT,BK,I/O,EVT |
| 10 | MCR BOTTOM | 23 | 2-PCI-SHIELD |
| 11 | DOOR-LOCK(DL-400) | 24 | 1-BACK |
| 12 | FIO(2AUDIO+2USB+1394) | 24 | CPU CLAMP FW-IDL-NOW |
| 13 | SCREW(FOR FIO-RACK) | 26 | LITEON 500W FULL RONGE |